Little bustard Tetrax tetrax

Background

The EU Species Action Plan for the little bustard (de Juana & Martínez, 2001) was developed in 1997 (published in 2001) approved by the Ornis Committee, and endorsed by the Council of Europe/Bern Convention.

This is the second review of the implementation of this plan, the first one made in 2006 with data collected in 2004 (Nagy, 2006). The plan has not been revised since its adoption.

The purpose of this review is to review the progress with implementation of the plan to date and to evaluate its effectiveness to achieve its objectives. Based on the findings, a revision of the action plan is ongoing.

The current implementation review covers the period 2004-2010. Data was collected through a questionnaire circulated between 1 May and 30 June 2010 through the BirdLife partners to national and regional experts in Azerbaijan, Greece, France, Italy, Portugal, Russia, Spain, Turkey and Ukraine. Information was received from all countries, except France and Russia for which the latest available published data was used (Attié and Micol, 2009; Antonchikov, 2006).

General overview

Progress in the overall implementation of the action plan is good but further work is still needed (overall IS=1.9). The SAP has been most successfully implemented in Greece, Spain, Italy and Portugal, despite the species not breeding in Greece.

A scores table of the implementation of each action (including a break-down of all actions into measurable targets) for each country is provided in Appendix 1.



Figure xviii Average implementation score (IS) and Action Priority Index (API) for each action listed in the Little Bustard species action plan. Colours represent Priority Score.

Status review

The species population is stable in Spain, based on an annual population change of -0.8% (-3.2% - 1.6%) between 1998-2008 (Del Moral et al., 2010). In all other countries from which monitoring data was available, the species continues to. The only country, which reported a population increase was Russia, but the quality of the data is poor as there are no census and conservation projects targeting the species (Antonchikov, 2006). The resident population in Southern France was found to be stable or even increasing in 2004.

It is important to standardize reporting of population estimates so that they are comparable both spatially and temporally, and thus European and global estimates and population trends can be determined. In order to obtain reliable population estimates, winter counts are recommended (ensuring all wintering populations are included) as they provide numbers of all individuals and account for recruitment. However, winter counts do not allow for differentiation between age classes and sexes and so breeding counts should be conducted as well. It is recommended that breeding population estimates be obtained by counts of males, which are then multiplied by accurate sex ratios to provide a calculated total number of individuals. Sex ratios should be reported not only to allow comparison between populations, but also because sex ratio is a key population parameter and a measure of productivity. (Table 2).

Country	Population at the time of the 1999 SAP	Year	Population at the 2006 review	Year	Current population	Year	Breeding trend	Reference
France	4,000-5,000 ind.	1994	1,483-1,675 males	2004 ¹⁹⁰	1677-1875 resident males 356-370 migratory males	2008	Increasing Stable	191
Italy - Peninsula	50 ind.	1995- 1996	15-20 ind.	2005	0	2010	10-30% Decreasing	192
Italy - Sardinia	1,500 - 2,200 ind.	1995- 1996	400-700 males 1,500-2,000 ind.	2005	530-960 ind.	2007, 2008, 2009	Decreasing	193
Portugal	10,000- 20,000 ind.	1994	>20,000 ind.	2003- 2004	13,260 - 21,771 males (breeding); 9,722 - 14,272 ind. (wintering)	2003- 2006	Unknown	194
Russia ¹⁹⁵	9,000 males	1990s	10,000-20,000 ind.	2004	-	-	-	-
Spain	100,000- 200,000 males	1996	50,000- 100,000 males	2004	41,482 - 86,195 males 71,112-147,763 ind. (breeding); 16,429-35,929 ind. (wintering)	2005	Stable	196
Turkey	0-50 ind.	1994	30-60 ind.	2004	1 -20 breeding; 5-50 wintering	2006 (breeding); 2009 (winterin g)	Decreasing	-
Ukraine	8-10 ind.	1994	100-110 ind.	1999 ¹⁹⁷	5 -7 pairs, 30 - 50 ind. (breeding); 70 - 80 (wintering)	2009	10 - 20% Decreasing	198

 Table 42 Population estimate by country

¹⁹⁰ Information from Attié and Micol, 2009

 ¹⁹¹ Information from the revised species action plan (Inigo, 2010).
 ¹⁹² Gustin M & Petretti F.2007, 2008, 2009 internal reports for LIPU Conservation Department

¹⁹³ Schenk et al., 1995; BirdLife Internaional 2004

¹⁹⁴ Silva & Pinto, 2006;

http://portal.icnb.pt/ICNPortal/vPT2007/O+ICNB/Estudos+e+Projectos/Proj_LIFE_natureza.htm;
 http://www.spea.pt/ms_sisao/index.php?op=documentos
 ¹⁹⁵ Data from Mischenko, 2004 in Antonchikov, A. 2006
 ¹⁹⁶ Population estimate from García de la Morena, et al. 2006. Trend data from Del Moral et al., 2010 (annual population change -0.8% (-3.2 – 1.6)between 1998-2008).
 ¹⁹⁷ Information from Andryuschenko, Y. 1999.
 ¹⁹⁸ Red Data Book of Ukraine, 2009. http://portal.icnb.pt/ICNPortal/vPT2007/O+ICNB/Estudos+e+Projectos/Proj_LIFE_natureza.htm;

Country	Season	No. of displaying males	Sex ratio (females and juv. to males)	No. of individuals	Quality of estimate	Year of estimate	Estimated trend	Quality of trend estimate
France	breeding	1,483- 1,675 ¹⁹⁹	1:1.4		Good (Observed)	2004	Decreasing	Good (Observed)
Italy	breeding	250 - 400 ²⁰⁰	1.4:1	530 - 960	Medium (Estimated)	2007, 2008, 2009	10-30% Decreasing	Medium (Estimated)
Portugal	breeding	$13,\!260 - \\21,\!771^{201}$			Good (Estimated)	2003- 2006	Unknown	Poor (Suspected)
	wintering			9,722 – 14 272	Good (Estimated)	2003- 2006	30 - 70% Decreasing	Medium (Estimated)
Spain	breeding	41,482- 86,195 ²⁰²	1.4:1	71,112- 147,763	Medium (Estimated)	2006	Stable	Good (Estimated)
	migrating/ wintering			16,429- 35,929	Medium (Estimated)	2006	Decreasing	Medium (Inferred)
Spain - Catalonia	breeding	721 - 1205 ²⁰³			Good (Observed)	2009	15 - 30% Decreasing	Good (Observed)
	migrating/ wintering			1,000 – 1,500	Good (Estimated)	2006	15% Decreasing	Medium (Inferred)
Turkey	breeding	1 - 20 pairs ²⁰⁴			Medium (Inferred)	2006	Decreasing	Poor (Suspected)
	wintering			5 - 50	Medium (Inferred)	2009	Fluctuating	Medium (Estimated)
Ukraine	breeding	5 -7 pairs		30 - 50 individuals 205	Medium (Inferred)	2009	10 - 20% Decreasing	Poor (Suspected)
	wintering			70 - 80	Poor (Suspected)	2009	Unknown	Poor (Suspected)

 Table 43
 Selected population parameters (size, trend and sex ratio) of the little bustard in countries covered by this survey.

Objective(s)

The objective of the 1999 action plan is to stop the decline of the threatened little bustard populations and to enhance the density and breeding success of the species throughout its range.

Evaluation

Based on the data collected for this evaluation, the objectives of the plan have not been met. Overall, the European population of the species continues to decline, although since the population is now stable in Spain, this decline is small. Enhancing the density and breeding success has not been achieved. Information about the breeding success from Spain and France has shown that it is far below optimal (Morales et al., 2005; Delgado et al., 2009) to maintain viable populations in the long term.

¹⁹⁹ Information from Jolivet, C., 2006.

²⁰⁰ Gustin & Petretti, 2007, 2008, 2009.

²⁰¹ Silva & Pinto, 2006.

²⁰² García de la Morena, et al., 2006.

²⁰³ Ponjoan, et al., 2010.

²⁰⁴ Information on number of males/ sex ratio was not available from Turkey and Ukraine.

²⁰⁵ Akimov - Kyiv, 2009

Conservation and legal status

The Global IUCN Red List Category of the Little Bustard is Near Threatened with criteria A2c,d; A3c,d; A4c,d nearly met (IUCN, 2010), because the population is estimated to be in decline owing to ongoing habitat destruction. The species is listed as Vulnerable in the European IUCN Red List under criteria A2b (BirdLife International, 2004), and is listed in Appendix I of the EU Council Directive on the Conservation of Wild Birds (79/409/EEC, 'Birds Directive'), Appendix III of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), and Appendix II of the Convention on International Trade of Wild Fauna and Flora (CITES).

Table 44 IUCN Red Listing classification of the little bustard since adoption of the International Action Plan

Year	Global IUCN Red List Category	
2008	Near Threatened	
2004	Near Threatened	
2000	Lower Risk/Near Threatened	

Overview of past and current threats

The main threats affecting the European little bustard populations have been well studied in France and the Iberian Peninsula. They are all connected to agricultural practices. The most important threats are:

- Increased mortality of females and juveniles by farm machinery;
- Insufficient food supply causing low breeding success;
- Habitat loss and degradation leading to local extinctions;
- And less importantly, shooting, collisions with man made structures and disturbance.

In the Iberian context, the unfavourable farming practices lead to landscape scale changes in the predominant land-uses. In agricultural habitats a shift to intensive farming practices is driven by irrigation schemes (public subsidies) and conversion of dry cereal crops to intensive perennial crops such as vineyards, olives, etc, as well as the substation of hard wheat with barley, which required earlier harvesting.

The loss of fallow land as an element of the farming mosaic is probably more important factor in France and Italy, where the agriculture is much more intensive than on the Iberian peninsula. There, the main causes for loss of favourable habitats are linked to production of bio fuel crops and the weak application of environmental safeguards and cross compliance.

In the eastern parts of the range the ecology of the species and the impact of threats is less well studied.

Assessment of the implementation

National and regional species action plans

National species action plans have been developed by France, Italy and Portugal. A regional plan is the process of approval in Catalonia.

Species conservation

Little bustards are legally protected from killing across their range. It is included in the national lists of threatened species. However, insufficient enforcement of the legal protection regime was mentioned by several countries (e.g. Turkey, Ukraine, Italy, Spain) mainly because of persecution by farmers and poaching.

France and Spain have attempted a joint programme of reinforcement of the populations in Central and Western France by release of captive bred chicks in the framework of a joint project²⁰⁶ between 2006-2009.

Site conservation

The species has dispersed distribution in lowland, predominantly agricultural landscapes which explain the large number of SPAs and needed for its effective protection. Nearly 750 SPAs have been designated in Spain, France, Portugal and Italy. In the same time the typical habitats of the species are under continuous threat by unfavourable agricultural practices. Despite of this progress, still less than half of the breeding population has been covered by protected areas. However, actual management of the habitat in these sites is required to ensure the conservation of the species, and the lack of such management is the key problem to be addressed. Agri-environmental measures on large scale have been the key instrument to deliver favourable management in and outside of SPAs, however their overall impact is yet insufficient (as population trends show). The main reasons for failure are the low uptake levels, the availability of counter productive incentives and loss of habitat diversity as a result of continuing intensification of farming.

An overview of the coverage of the population with protected areas is presented in Table 4.

²⁰⁶ LIFE04/NAT/FR/000091

Country	Percentage of national population included in IBAs	Percentage of national population included in SPAs	Percentage of national population included in protected areas under national law.
Greece	10-50%	10-50%	0-10%
France		30%	N/A
Italy	30 - 50%	30 - 50%	0%
Portugal	34 - 48%	29 - 43%	0-10%
Spain	N/A	26.3 - 33.2	N/A
Spain - Catalonia	90-100%	50-90%	50-90%
Turkey	50 - 100%	N/A	N/A
Ukraine	70 - 80%	70 - 80%	70 - 80%

Table 45 Overview of the coverage of the little bustard populations in sites with legal protection.

In Catalonia, Management Plans for the SPA with little bustard population have been developed and agri-environment schemes are in place in most sites. In other Spanish autonomous communities, management plans for SPAs have not been developed and implemented. The agri-environmental schemes have various degrees of success, generally failing to attract sufficient number of farmers to take part.

Portugal has designated 8 new SPAs, but actual management targeted at the species is taking place in one SPA only – Castro Verde.

In Italy, Sardinia approx 50% of the species breeding range lies in SPAs, but no effective site conservation measures are in place; fragmentation of large extensive farmland continues and high-nature value grasslands are being replaced with intensive crops at an increasing rate. As a result, a 20% decrease of the monitored population in last 5 years took place. One of the most important breeding areas, the Campeda plateau (estimated at 100 breeding males in 1980s (Petretti, pers. com.) has been dramatically transformed at the end of 1990s by stone crushing and removal of the natural vegetation, and today 0-3 displaying males remain. In Apulia despite of the fact that 50% of the former species range lies in the Gargano national park , the lack of conservation measures has lead to local extinction.

In France, targeted agri-environmental measures (MAET) have been developed and tested in the regions of Pitou-Charentes on 137 500 ha of arable land. Management agreements have been elaborated and signed with farmers, which are believed to have lead to small increase of the affected populations. Therefore, a supplementary programme for restocking has been initiated.

Greece, Macedonia, Turkey and Ukraine have done little habitat conservation measures or only individual projects on small scale.

Monitoring and Research

In France, Spain and Portugal national census takes place every 5 years as part of national monitoring programmes. Coordination on monitoring the species in SPAs has to be improved further in Italy.

Community financial support

Seven LIFE projects²⁰⁷ have been implemented since 2004 that benefit the little bustard: two in Spain and one in France, Italy and Portugal, two in Portugal, one in Italy and one in

France, with the total funding of more than \notin 9.8 million Euros and an EU contribution of more than \notin 6.1 million Euros.

In addition, one project (Avifauna III) receiving 400,000 Euros of national government funding is being carried out between 2009 and 2011 that benefits the species.

Conclusions

Progress in the implementation of the action plan has been insufficient (Average IS 1.9).

- The plan fails to achieve its objectives due to insufficient integration with the agricultural practices. This is evident from the low Average IS of the relevant actions 1.1.1 (Ave. IS 1.5) and 2.1.2 (Ave. IS 1.2)
- Stakeholder involvement (farmers and agriculture administration) is a key to the success of implementation and it has not been achieved at sufficiently large scale.
- Despite of the clear evidence of continuing decline of the species most of the known threats have continued to increase across the species range.
- Positive results have been achieved only locally, where targeted funding has been provided in combination with specialized expert support on the ground.

The revised SAP should involve closer the farming community to increase their buy-in.

- In order to maintain or increase the range, the potential future climate space needs to be taken into account.
- At a biogeographical scale, the existing subpopulations should be the primary conservation target.
- It is not feasible to restore the species in former range, where the suitable habitat was completely lost.
 - ⇒ Lower priority should be given to reintroduction and restocking projects, as they are also technically difficult.
- Conservation measures should be preferred to restoration measures.

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²⁰⁷ LIFE04 NAT/FR/000091; LIFE07 NAT/IT/000426; LIFE07 NAT/P/000654; LIFE02 NAT/P/008476; LIFE2003NAT/CP/P/000008; LIFE07 NAT/E/000731; LIFE04 NAT/ES/000034.

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Table 46 Implementation of the action plan in the European range states²⁰⁸. PS = Priority Score; Ave. IS = Average Implementation Score; API = Action Priority Index: National IS = National Immlementation Score.

	лон т гиогих типех, гланонат вз – гланонат пириеннании эсоге.		ļ										
Ac	tion Measure		PS	GR	ц Ц	S - P	T E	SEC	<u>F</u>	۲ UA	IS IS	e. AP	I
1.	.1.1 Agricultural policies promote the maintenance of biodiversity as an objective alon	side production objectives	3	1	1	2 2	.3 1	5	0	-	1.5	2.5	10
	a. Article 39 of the EU Treaty is reformed, defining biodiversity objectives of agricultu	e policy.	4	-	1	0	0 1	0	0	1	1.0	4.(
	b. Sectoral plan under the EU biodiversity strategy elaborated.		4	0	0	0	3 1	0	0	1	1.7	7 3.]	
	c. Livestock support systems encourage low-intensity grazing regimes by decoupling p	yments from livestock heads.	2	0	0	0	3 1	0	0	1	1.7	7 1.6	5
	d. Policies regulating cattle stock management are ecologically sound.		7	0	0	0	2 1	0	0	1	1.3	1.8	~
	e. Agri-environment measures that promote agricultural practices compatible with LB (onservation in place & effective.	4	-	1	5	1	5	0	1	1.3	3.6	5
1.	2.1 Forestry policies are sympathetic to wildlife and are compatible with the conserva	ion of the little bustard	e	1.5	0	0 1	51.	5 0	0	0	1.5	2.5	10
	a. Afforestation schemes are subject to Environmental impact assessments/ appropriate the LB in its habitats.	assessments, taking into account	ŝ	5	0	0	1.	5 0	0	0	1.5	2.5	10
	b. Afforestation of grasslands and arable land is strictly prevented in the most importan	LB areas.	3	1	0	0	2 1.	5 0	0	0	1.5	2.5	6
1.	$3.1~ _{ m To}$ seek full legal protection in national law for the Little Bustard in each range st	te	2	4	4 3	3.7	4 3.	3 4	3	1.7	3.5	0.4	#
	a. The LB receives full legal protection in national law.		2	4	4	4	4 4	4	3	1	3.5	0.0	3
	b. The LB is included as a threatened species in National Red Data Book/ National Cat	logue.	2	4	4	3 4	4 3	4	4	3	3.6	0.0	~
	c. Appropriate legislation relevant to 'threatened' listing is implemented.		2	4	4	4	0 3	0	2	1	3.(0.0	
1.	.4.1 International co-operation is in place involving all range states.		2	4	0	0	0 0	0	1	4	3.(0.0	
	a. Regional agreement on the Conservation of Palearctic Dry Grassland Birds is establi	hed under the Bonn Convention.	. 2	4	0	0	0 3	0	1	4	3.(0.0	
2.	1.1 To designate all Important Bird Areas that contain significant populations of little under national and international law.	bustard as protected areas	3	3	7	3	2 1.	3 3	0	2	2.3	1.5	~
	a. All IBAs in the EU Member States, holding significant LB populations, are designat	d as SPAs.	3	4	2	3	2 1.5	5 3	0	2	2.5	1.5	10
	b. Protected areas established (under national law) in non EU countries.		2	2	0	0	0 1	0	0	2	1.7	7 1.6	2
5	1.2 Ensure protected areas are adequately protected and managed		3	1	1	-	1 1.	1 1.	5 0	1.3	1.1	2.9	6
	a. Developments that could change or fragment the habitat are prevented.		б	-	0	0	1 1.	5 2	0	1	1.3	5.2	

²⁰⁸ GR = Greece; IT = Italy; IT-S = Italy – Sardinia; PT = Portugal; ES= Spain (National); ES – C = Spain – Catalonia; TR = Turkey; UA = Ukraine.

	b. Availability of legume crops and unploughed fallows increased and cultivated land temporarily set-aside.	ю	-	0	1	1	2	0	7	1.3	2.7	
	c. Key predators controlled where predation is a significant problem.	2	-	0	0	0	-	0	-	1.0	2.0	1
	d. Pesticide use reduced in order to ensure adequate food resources.	3	-	1	0	0 1	1	0	-	1.0	3.0	1
2.1.3	Prevent any hunting or poaching of the Little bustard	1	7	i.	1	3 2	1	1	1	1.6	0.8	1
	a. Hunting laws adequately enforced.	1	2	2	1	4 3	1	1	1	1.5	0.7	1
	b. Hunters and farmers (on whose crops the LB may feed) have increased awareness of the LB.	1	0	-	0	2 1	1	1	-	1.2	0.9	1
3.1.1	Develop and implement an international population monitoring programme for the Little bustard	3	e	5	2.5 2	.5 2.3	3	1	1	2.3	1.7	1
	a. Census methods to be used throughout the range of the species are standardised.	3	Э	3	2	3 3.	5 3	-	-	2.4	1.6	1
	b. Trends in distribution, population size, density of breeding males and sex ratio of the LB throughout its range are accurately quantified and monitored.	n	0	5	3	2 2	3		-	2.0	2.0	
3.2.1	Conduct research on the breeding biology, habitat requirements, movements and wintering areas of the LB	3	3	5	1.7 2	.7 2	3 2.3	3 1	1.3	2.0	2.0	
	a. Breeding biology research and understood.	3	0	1	2	2 2	2	1	1	1.6	2.4	
	b. Factors affecting breeding success determined.	3	0	0	0	2 1.5	5 2	0	2	1.5	2.1	
	c. Diet of adults and chicks investigated and related to food availability.	3	0	0	0	2 1	1	0	-	1.3	2.8	1
	d. Habitat selection across the species' range researched.	3	0	2	2	4 3	3	1	2	2.4	1.6	
	e. Movement patterns of the Little bustard identified by marking birds.	3	0	0	1	3 3	3	0	1	2.2	1.8	
	f. Wintering areas located and habitat requirements identified.	3	3	0	0	3 3	3	0	1	2.6	1.4	
3.3.1	Evaluation of management/ conservation measures for the LB	3	0	0	1	1 1	2.3	3 0	1	1.3	2.7	
	a. Application of agri-environment measures targeted at the LB is monitored.	3	0	0	1	1 1	3	0	1	1.4	2.6	
	b. Application of agri-environment measures targeted at the LB is improved following results of monitoring.	3	0	0	0	1 1	2	0	1	1.3	2.8	
	c. Implementation of agri-environment measures targeted at the LB by farmers is increased.	3	0	0	0	1 1	2	0	1	1.3	2.8	
4.1.1	Raise public awareness and inform the rural community about the conservation needs of the LB	3	0	Ś	0 1	.3 1	1.	3 0	1	1.2	2.8	
	a. Rural communities and farmers are aware and supportive to the conservation of the species and its habitats.	3	0	1	0	1 1	1	0	1	1.0	3.0	
	b. Cases of unintentional or intentional persecution, killing or disturbance are fully prevented.	3	0	5	0	2 1	1	0	-	1.4	2.6	-
	c. Profile of the LB raised as an important element of European natural heritage.	2	0	1	0	1 1	1	0	1	1.0	2.0	
	d. The LB established as a flagship species for the protection of steppic habitats throughout Europe.	2	0	2	0	1 1	2	0	1	1.4	1.7	
4.1.2	Provide training and advice to conservation and agricultural agencies	2	0	1	0 2	.5 1.	5 1	0	1	1.4	1.7	
	a. Technical training provided to conservation staff on LB biology, census techniques and management practices.	2	0	1	0	3 2	-1	0	1	1.6	1.6	

vised on the requirements of LB. 2 0 0 0 2 1 1 1 0 1 1.3 1.8	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
b. Agricultural agency staff in charge of agri-environment measures are advi	National & Average IS	

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